

15. *RISSOINA NODICINCTA*, A. Adams. *R. testá subulato-turritá, albá, solidá, anfractibus 10-12, convexis, longitudinaliter plicatá, plicis angustis, distantibus, transversim tenuissimè striatá, in medio anfractuum cingulá elevatá ad plicas nodosá, ornatá, suturá nodulis moniliformibus cinctá; aperturá semiovatá, anticè subcanaliculatá; labio anticè callo terminato; labro dilatato, extus incrassato, margine flexuoso.*

Hab. Isle of Capul, Philippines. Mus. Cuming.

16. *RISSOINA CÆLATA*, A. Adams. *R. testá subulato-turritá, albidá, solidá; anfractibus octo, convexiusculis, supremis clathratis, ultimo cingulis elevatis, æqualibus, subdistantibus, transversis, interstitiis lineis elevatis, longitudinalibus et transversis, decussatim ornato; aperturá semiellipticá, anticè subcanaliculatá; labio calloso; labro anticè dilatato, margine incrassato, subreflexo.*

Hab. Siquijor. Mus. Cuming.

The two following species are true *Rissoæ*, characterized by the simple aperture, which is not channeled in front, and by the absence of the calcareous appendage to the operculum. Many species of small shells have been inaccurately referred to *Rissoa*, some of which belong, however, to entirely different families.

RISSOA BELLA, A. Adams. *R. testá turrito-subulatá, albá, solidá; anfractibus quinque, planiusculis; spirá apice obtuso, lineis transversis, elevatis, concentricis, confertis, ornatá; aperturá ovali, anticè integrá; labio subcalloso; labro subdilatato, extus marginato, margine flexuoso.*

Hab. Philippine islands. Mus. Cuming.

RISSOA ELEGANS, A. Adams. *R. testá subulato-turritá, albá, semipellucidá; anfractibus 7, convexiusculis; suturá canaliculatá, lineis elevatis transversis concentricis et longitudinalibus concinnè decussatá; aperturá ovali, subproductá, anticè integrá; labio calloso; labro anticè dilatato, extus varicoso, margine acuto, subreflexo.*

Hab. Philippines. Mus. Cuming.

BOTANICAL SOCIETY OF EDINBURGH.

The Society opened their Eighteenth Session on Thursday, November 10th,—

Professor Balfour, President, in the Chair.

Dr. Balfour, in taking the Chair, alluded to the value of the Society as a means of keeping up a friendly intercourse among those who were prosecuting the science of botany. He noticed the recent researches in regard to the class of plants called Diatomaceæ, and stated that a large microscopical collection had been made at the Botanic Garden, and that the specimens would be exhibited during the Session.

A new part (concluding volume iv.) of the Society's 'Transactions' was placed on the table, containing papers by Professor Balfour, Mr. Babington, Professor M'Cosh, Dr. Greville, Major Madden, Dr. Wilson, Dr. Macadam, and Dr. Macgowan. The Secretary stated that the price of the Part had been fixed at 4s.

Many donations to the Society's library and herbarium were announced.

Dr. Balfour read a note from Professor Gregory, in which he stated that he had continued the examination of the Mull deposit of Diatomaceous loricae, which he described last winter as containing 60 species of Diatoms, and that he had now found in it upwards of 140 species, which beats all the richest deposits known. Even at 60 it was far the richest. Besides the new species doubtfully indicated in his former paper, which Smith had named *Eunotia incisa*, he had found another and a very beautiful species, new not only to him, but to all those who had yet seen it or a figure of it. It is a *Pinnularia*, which, provisionally, he had named *P. hebridensis*. It is scarce in the deposit, a large and populous slide rarely yielding more than one specimen, and often none at all; and as yet he has not been able to find a trace of it in any other deposit within his reach, nor is there anything like it in any work he had seen. As to *Eunotia incisa* it occurs in a deposit from Lapland, in that from Luneberg, and in one from the banks of the Spey, and it seems remarkable that it has been so long overlooked. *P. hebridensis* is small, its length from $\cdot 00125$ to $\cdot 0026$ inch, and it has, like *P. lata*, *P. alpina*, and *P. distans*, only nine or ten costae in $\cdot 001$ inch. But all these are three or four times larger, and all on the side view are widest in the middle, whereas *P. hebridensis* is slightly contracted there. But it has the general characters of these three species from the fewness and thickness of the costae.

The following papers were read:—

1. "Account of a Botanical Trip to the Grampian Mountains in August 1853," by Professor Balfour.

He gave a general account of the Clova and Glen Isla district which was visited, and noticed the rare alpine plants gathered. He offered some observations on the remarkably limited distribution of the *Oxytropis campestris* and *Lychnis alpina*, which were confined, the former to a single rocky projection in Glen Fiadh, and the latter to a small mountain summit called Little Gilrannoch. These plants only spread to a small extent from a centre. Besides the usual alpine plants, the party gathered a profusion of *Polypodium alpestre* in various states. In Glen Fiadh the plant was small, and very little of it was in fructification. In this state it is difficult to distinguish it at first sight from *Athyrium Filix-fœmina*. In Glen Dole the plant was also seen abundantly, but in most parts sparingly in fructification. At the upper part of the glen, near the falls of the White Water, and at the station where *Mulgedium alpinum* was originally found by Don, there were fine specimens of the *Polypodium*, 2 or more feet high, abundantly covered with sori. The same thing occurred a little above the track called Jock's Road. In these localities the fern was associated

with fine specimens of *Athyrium filix-fœmina*. The party looked in vain for specimens of *Carex Grahami* in the old station in Glen Fiadh, and they failed in seeing *Potentilla tridentata* on the rocks near Loch Brandy, which is the station given for it by Don. Dr. Balfour noticed the heights at which the alpine species occurred, and exhibited a plan of the alpine district of Scotland, with specimens of the plants arranged upon it at their different altitudes.

Dr. Balfour stated that, through the kind permission of Colonel Ogilvie, the party had the use of the large hall at Clova, and that Lord Castlereagh offered every facility for visiting Caënlochan Glen.

2. "Notes of a Tour on the Hartz Mountains, Part II.," by W. Lauder Lindsay, M.D.

3. "Note on a Vegetable Substance formed in a water-pipe at Hafton, Argyleshire," by James Hunter, Esq. of Hafton. Communicated by Henry Paul, Esq.

About twelve months ago, having occasion to bring in an additional supply of water for the use of Hafton House, I had formed a small reservoir or fountain-head, as it is called, from which to lead the water to the then only existing fountain-head, so as to increase the supply in the latter. The connexion between the two was by means of a burnt clay-pipe, 2 inches in diameter, and in lengths of 36 inches, securely fastened at the joinings with Roman cement or mastic, the total length of the piping being 320 yards, secured at each end by zinc roses 4 inches in diameter in order to prevent any impurities passing through the pipe. When the work was finished the supply of water was very good, and it continued so until a fortnight ago, when the running of the water through the tile piping gradually diminished, and at last almost entirely ceased, a mere driblet, indeed, finding its way into the old fountain-head. Upon examination as to the cause of this change, by raising a considerable portion of the piping, there was found about halfway between the two fountain-heads the vegetable substance herewith sent. It was firmly lodged in one length of the piping and projected an inch or so into another.

It is very curious to observe that the colour of the water pressed out of this substance when first taken out of the pipe, and saturated as it was, was deep brown, whereas the water itself flowing through the pipe to the very last was as pure as crystal.

Several new Members were proposed, and the Society then adjourned till the second Thursday of December.

December 8, 1853.—Professor Balfour, President, in the Chair.

The following office-bearers were elected for the ensuing year:—

President.—Professor Balfour.

Secretary.—Dr. Greville.

Treasurer.—W. W. Evans, Esq.

Curator of Museum.—Dr. Anderson.

Assistant Secretary and Curator.—Mr. G. Lawson.

The following papers were read:—

1. "Notice of a Botanical Trip to Helvellyn, with pupils, in July 1853," by Professor Balfour.

2. "Notes of a Tour on the Hartz Mountains, Part III.," by Dr. Lindsay.

3. "On the Physiological and Therapeutical actions of *Cannabis indica*," by Dr. James B. Balfour, Kilsyth.

4. "Notice of Plants found in the neighbourhood of Dollar in the autumn of 1853," by Dr. Balfour.

ROYAL SOCIETY OF EDINBURGH.

Tuesday, December 6, 1853.—Sir Thomas Brisbane, President, in the Chair.

Notice of the Blind Animals which inhabit the Mammoth Cave of Kentucky. By JAMES WILSON, Esq.

The cave in question was described as of great extent, and remarkable in several respects. Although described as a "cave," it consists of innumerable extensive underground galleries, the sides and tops of which consist of limestone. The temperature of the cave is uniformly 59° Fahrenheit throughout the whole year, and a remarkable phænomenon is shown by the variation of temperature outside. When the temperature outside is higher than that of the cave, then an outward current of air is observed, its violence being proportionate to the difference of temperature. On the other hand, when the outer air falls below 59°, then a reverse current sets in. In some cases these currents are so strong as to extinguish the lamps carried by explorers. No change of temperature has, however, been on any occasion observed in the cave, a proof of its vast extent. It is completely dark, but inhabited by some animals. These inhabitants are, in most cases that have been observed, completely blind, some indeed having the rudiments of eyes, and others the eyes to *appearance* pretty well developed, but useless for the purposes of vision. Specimens of the animals were handed round, and the author of the paper detailed their characteristics and habits, as well as of all other remarkable animals in other parts of the world that are known to be without the power of vision. As blind inhabitants of the Kentucky cave, he noticed two bats, two fishes, several beetles, two rats,—one found at a distance of seven miles from daylight, some spiders, moles, crustacea, and other animals, including the minute infusoria, which last not being furnished with eyes in those species that live in light, were not to be expected to possess them in those that live in darkness. He alluded to the blind mole of the Cape, and also to the blind mole of Greece, which is the common mole there, and the mole of Aristotle. Aristotle was therefore correct in describing *the mole* as blind, and his correctors and commentators wrong who found eyes in the British mole, which is a different animal, possessed of the faculty of vision. He also noticed a blind reptile. The inquiry as to the origin of those remarkable beings that inhabit the Kentucky cave is full of interest. Whether their origin is coæval with the cave itself we cannot tell; it may be that they were created for the remarkable conditions which